

CLAIMS

1. A steering apparatus for altering steering direction of an exercise bicycle that utilizes an interactive computer or television video game simulation, comprising,

a steering mechanism primary frame, including a steering tube and a steering plate, said steering tube disposed within an exercise bicycle frame head, said steering plate having a potentiometer mounted thereupon,

a steer frame rotatably mounted within the steering mechanism primary frame having at least one spring contiguously suspended between the primary frame and the steer frame such that changing steering direction by manual planar rotation of a handlebar attached to the steer frame creates progressively varying linear resistance, the steer frame returns to a centered position when unrestrained, duplicating the feel and impression of riding a bicycle, and

said potentiometer interfacing with said rotatable steer frame providing variable electrical resistance relative to the directional movement of the steer frame to the primary frame, wherein an electrical signal transmitted from an interactive computer or television video game to the potentiometer interprets actual steering position.

2. The steering apparatus as recited in claim 1 wherein said steering mechanism primary frame further comprises an L-shaped frame adapter rigidly attached to an exercise bicycle frame head.

3. The steering apparatus as recited in claim 1 wherein said steer frame further comprises a steer member with a potentiometer lever bracket permanently attached at a right angle thereunto.

4. The steering apparatus as recited in claim 3 further comprising a handlebar stem disposed within the steer member of the steer frame and a handlebar attached to the stem.

5. The steering apparatus as recited in claim 4 further comprising a head set rotatably affixing the steer member within the primary frame steering tube.
6. The steering apparatus as recited in claim 1 wherein said primary frame steering plate having a radial slot therein and said steer plate potentiometer lever bracket having a guide pin extending therefrom with the guide pin penetrating the slot for limiting rotational travel between the primary frame and the steer frame.
7. The steering apparatus as recited in claim 6 wherein said guide pin further comprises an attached guide pin reinforcing yoke for bracing and strengthening the guide pin.
8. The steering apparatus as recited in claim 1 wherein said at least one spring contiguously suspended between the primary frame and the steer frame further comprise a pair of opposed extension springs.
9. The steering apparatus as recited in claim 8 further comprising said primary frame having a pair of spring retainers and said steer frame having a pair of spring holders wherein each extension spring fasten between a spring retainer and a spring holder.
10. The steering apparatus as recited in claim 1 wherein said steer frame potentiometer lever bracket having a potentiometer lever slot therein in alignment with said potentiometer.
11. The steering apparatus as recited in claim 10 further comprising a potentiometer arm bushing slideably disposed within said potentiometer lever slot wherein said potentiometer having an adjusting lever interfacing with the potentiometer linear adjustment lever permitting the potentiometer to be adjusted throughout the axial travel

of the potentiometer lever bracket relative to the linear travel of the potentiometer adjusting lever.

12. The steering apparatus as recited in claim 1 further comprising a cover enclosing the steering plate bottom portion including the steer frame and springs.

13. A steering apparatus for altering steering direction of an exercise bicycle that utilizes an interactive computer or television video game simulation, comprising,

means for rigidly mounting a potentiometer to an exercise bicycle frame head,

a steer frame rotatably mounted into said potentiometer mounting means, said steer frame having spring loading changing steering direction by manual planar rotation of a handlebar attached to the steer frame creates progressively varying linear resistance, the steer frame while the steer frame returns to a centered position when unrestrained, duplicating the feel and impression of riding a bicycle, and

means for potentiometer interfacing with said steer frame providing variable electrical resistance relative to the directional movement of the steer frame to the primary frame, wherein an electrical signal transmitted from an interactive computer or television video game to the potentiometer interprets actual steering position.

14. A steering apparatus for altering steering direction of an exercise bicycle that utilizes an interactive computer or television video game simulation, comprising,

a steering mechanism primary frame, disposed within an exercise bicycle frame head, said steering mechanism having a potentiometer mounted thereupon,

a steer frame rotatably mounted within the primary frame having spring loading wherein changing steering direction by manual planar rotation of a handlebar attached to the steer frame creates progressively varying linear resistance, the steer frame while the steer frame returns to a centered position when unrestrained, duplicating the feel and impression of riding a bicycle, and

said potentiometer interfacing with said steer frame providing variable electrical resistance relative to the directional movement of the steer frame to the primary frame, wherein an electrical signal transmitted from an interactive computer or television video game to the potentiometer interprets actual steering position.